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# Evaluation of

## Healthier at Home/Nurse Line:

### A Cost-Benefit Analysis



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## ***Problem Statement***

A vendor is currently under contract with the Employee Insurance Program (EIP) to provide a printed self-healthcare guide (a handbook) and a toll-free Nurse Line service to State Health Plan (SHP) Savings Plan subscribers. The handbook and Nurse Line are provided at no additional charge to those enrolled in the Savings Plan, but are part of the overall costs associated with this health plan and paid by EIP to the contracted provider each month, based on the number of subscribers enrolled in the plan.

**Are this product and service worth the cost?** The purpose of the handbook and Nurse Line is to engage individuals to assume more responsibility in understanding their health care choices, make more informed decisions regarding self-care and take a more active role in medical self-management, which, in turn, should reduce some plan costs, such as to reduce emergency room and office visits, which may be determined to be unwarranted in certain situations. A 2003 pilot project in the upstate of South Carolina involved both private and public sector individuals who received a self-care handbook and access to a Nurse Line. The pilot project touted significant cost savings during the 30-month program, mostly related to the self-care handbook, in reduced emergency room and physician office visits.<sup>1</sup>

1. Based on the vendor-reported utilization data for the Nurse Line, it initially appeared questionable whether the service is worth the cost to the plan. There was no vendor-provided utilization data for the *Healthier at Home* book. The administrative costs for this plan currently average more than \$16,000 per month, based on current enrollment figures for the Savings Plan. The American Institute of Preventive Medicine (AIPM) is the vendor contracted with EIP to provide the handbook and Nurse Line to subscribers of the State Health Plan Savings Plan.

2. As EIP continually seeks to contain costs while maximizing best-dollar-value of benefits for its customers, evaluating the value and utilization of the book and Nurse Line is a logical step in that process. By examining utilization of the *Healthier at Home* book and Nurse Line, EIP may be able to determine the effectiveness of these two products, which are currently offered to all enrollees in the State

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<sup>1</sup> Partners Health Initiative Final Program Evaluation, Insights Consulting, Dr. John R. Ureda, 2003.

Health Plan Savings Plan. Based on preliminary research, these products were offered not only as self-help tools for those enrolled in a high-deductible health plan which promotes its enrollees to take a more proactive and self-management approach to their health care through self-assessment, but also to save the plan money by helping enrollees avoid unnecessary trips to their physicians or urgent care facilities, such as the emergency room.

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## ***Data Collection***

The primary goals of the data collection:

- Measure customer utilization of the book and Nurse Line
- Compare utilization to plan costs
- Calculate whether the book and Nurse Line are cost-efficient, based on estimated savings from utilization

The data-collection methods:

- Plan cost data for the contract, based on the contract service charges as part of overall premium and current enrollment to derive total and per member/subscriber cost, given resulting utilization data
- Plan expense data as reported by the EIP Research and Statistics Unit and based on enrollee claims, including subscribers and covered dependents
- Subscriber enrollment data for determining survey sampling and for contract charges
- Survey data to collect subscriber responses to utilization questions about the book and Nurse Line, heretofore not measured for the book for customer feedback for usefulness (contact information for individual enrollees/covered dependents not available)
- Utilization data for the Nurse Line as reported by contracted vendor, AIPM (no data is collected by the vendor for book utilization) for customer input and to determine usefulness, based on enrollee calls, including subscribers and covered dependents

Operational definitions:

- *AIPM*. The American Institute of Preventive Medicine (AIPM); the vendor currently under contract with EIP to provide the handbook and Nurse Line.
- *EIP*. Employee Insurance Program
- *Enrollee*. Anyone eligible and enrolled in the health plan. This would include the subscriber, plus any of his dependents who are enrolled (spouse and/or children).
- *Subscriber*. The employee or retiree who is eligible for health coverage and who is enrolled in the plan. A subscriber may be the only one enrolled in the plan, or he may also have one or more eligible dependents enrolled in the health plan.
- *Pm/pm*. Per member, per month. The term *member* in this instance means *subscriber*, as the subscriber is the one who pays the premium for his own coverage and for that of any of dependents he chooses to cover.
- *Pm/py*. Per member, per year.

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## ***Data Analysis***

### **1. AIPM Contract and Backgrounder**

- Contract for handbook and Nurse Line: Current contract period: 1/1/2010 – 12/31/2012, with option to renew two one-year periods
- *Savings Plan Enrollment*:
  - **As of January 1, 2012; 7,056 subscribers and 11,168 enrollees<sup>2</sup>**
  - As of 2008 (for bid purposes): 5,899 subscribers; total enrollees not included in bid specs; contract based on per-subscriber charge
- During the last contract period (ended 12/31/09), a change order to increase the per-member per month (pm/pm) fee from \$1.28 to \$2.37 was approved to start 1/1/08.
  - This increase also included a new monthly newsletter to be mailed directly to subscribers.

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<sup>2</sup> Per enrollment count from EIP Research and Statistics Unit



- Contract was rebid in 2009. Winning bid offered a cost of \$2.37 pm/pm (per contractor, no change from previous amendment). Total of \$28.44 pm/py. At current enrollment of 7,056 subscribers, current cost to Savings Plan is now:

- \$16,723 per month; \$200,673 per year** (based on current enrollment above; does not factor in rolling enrollments throughout the year; averaging about 500 additional subscribers per year).
  - Total costs for the Savings Plan over the past 4 years:**

Year	Total	Increase over previous year
2008	\$158,361	NA
2009	\$167,836	5.99%
2010	180,729	7.68%
2011	195,101	7.95%

- Price breakout received by AIPM for current contract period:

Product	pm/pm
Healthier at Home book with imprint	\$0.24
Healthier at Home book mailing	\$0.16
Welcome packet	\$0.04
24/7 Nurse Line	\$0.79
Monthly Newsletters with imprint	\$0.46
Monthly Newsletter mailings	\$0.32
Project set-up, implementation, reporting, promotion and account management	\$0.36
<b>TOTAL</b>	<b>\$2.37</b>

## 2. Contract expenses to the Savings Plan

- Healthier at Home*. Savings Plan subscribers receive 1 copy per household after enrolling. All 6,244 existing members received the newest book in February 2010 with the start of the new contract. Subscribers do not receive a book each year; only when the edition changes significantly.
  - Book cost was \$6.84 ea. per 2008 contract amendment (see below). Shipping was \$1.67 ea. for the initial mass mailing and \$2.47 ea. as new subscribers enroll (as reported by AIPM).
  - Based on pm/pm pricing, the book costs \$0.40 pm/pm, or \$4.80 pm/py.

- **Cost to Savings Plan each year is estimated \$4.80 X 7,056 subscribers = \$33,869.** Each year, the Plan will incur an estimated additional \$2,400, based on average increase of 500 new subscribers per year and when those subscribers enroll during the year.
- A 24-hour Nurse Line is also part of the contract (subcontract for AIPM; provided by FONEMED) and available free to all Savings Plan enrollees. The Nurse Line 800# is imprinted on front cover of the handbook and on the back of the subscriber's health plan ID card. The Nurse Line is a subcontract for American Institute, which produces the handbook.
  - Based on pm/pm pricing, the Nurse Line costs \$0.79 pm/pm, or \$9.48 pm/py.
    - **Cost to Savings Plan each year is \$9.48 X 7,056 subscribers = \$66,891.** Each year, the Plan will incur up to an estimated \$4,740, based on average increase of 500 new subscribers per year and when they enroll during the year.
- The welcome letter packet that accompanies the *Healthier at Home* book is priced at \$0.04 pm/pm or \$0.48 pm/py.
  - Cost to Savings Plan each year is \$0.48 X 7,056 subscribers = \$3,387. Each year, the Plan will incur up to an estimated \$240, based on average increase of 500 new subscribers per year and when they enroll during the year.
- A monthly newsletter is also part of current contract. This is a generic, health and wellness newsletter which is branded, 8+ pages, mailed to subscribers. It contains no customized information regarding the Plan or its benefits.
  - Based on pm/pm pricing, the monthly newsletter costs \$0.78 pm/pm, or \$9.36 pm/py.
    - Cost to Savings Plan each year is \$9.36 X 7,056 subscribers = \$66,044. Each year, the Plan will incur up to an estimated \$4,680, based on average increase of 500 new subscribers per year and when they enroll during the year.
- Administrative costs, per breakout from American Institute is \$0.36 pm/pm or \$4.32.
  - **Cost to Savings Plan each year is \$4.32 X 7,056 subscribers = \$30,482.** Each year, the Plan will incur up to an estimated \$2,160, based on average increase of 500 new subscribers per year and when they enroll during the year.

### **3. Savings Plan Subscriber Survey Summary and Data**

- 3,000 Savings Plan subscribers out of 7,018 (42.7% of subscriber enrollment as of October 1) were surveyed at random through an online survey form. Subscribers were asked a series of questions related to:
  - Their access and frequency of use of the Healthier at Home handbook
  - Their access and frequency of use of the Nurse Line
  - Whether their use of these self-help sources saved them a trip to the physician or ER, key cost indicators tied to the original pilot project in 2003.
- Out of 3,000 surveyed, 860 responded (28.7%), establishing 95%+ confidence rating when compared to total enrollment; 12.3% response to total population).
- **Significant findings:**
  - 29% were not aware of the Healthier at Home handbook, which they would have received in the mail soon after enrolling in the Savings Plan; 31% did not think they even had a copy.
  - 60% (514) responded they had not used the handbook within the past year. Of that 60%, 71% (358) responded they had never used it.
  - Of those who have used the handbook, 17% (140 responses) indicated the handbook saved them a trip to the doctor, and 7% (57 responses) indicated the handbook saved them a trip to the emergency room.
  - 48% were not aware of the Nurse Line, for which the number is printed on the front of their Healthier at Home handbook and included in the welcome letter from AIPM.
  - 93% responded they had not called the Nurse Line within the past year. Of that 93%, only 7% (57 responses) indicated they had ever called it.
  - Of those who have called the Nurse Line, 42% (48 responses) indicated the Nurse Line saved them a trip to the doctor, and 22% (25 responses) indicated the Nurse Line saved them a trip to the emergency room.



- When asked what sources of information they consult most frequently for medical questions or concerns, the majority—39%--responded they use the Internet; 10% responded they use the handbook; 2% responded they use the Nurse Line.

#### 4. Nurse Line Call Data as Reported According to Contract<sup>3</sup>

Summary reports total calls for period, basic caller demographics and where the caller is directed for further assistance, if needed, such as Urgent Care, 911, etc. and caller compliance response.

Year	# Calls	% of Enrollment	Final Dispositions <sup>4</sup> (top 3 categories)
2011	48	<ul style="list-style-type: none"> <li>• 0.68% of subscribers</li> <li>• 0.43% of enrollees</li> </ul>	<ul style="list-style-type: none"> <li>• 40%: Information provided</li> <li>• 21%: Urgent care</li> <li>• 17%: Contact medical care within 24 hour</li> </ul>
2010	123	<ul style="list-style-type: none"> <li>• 1.82% of subscribers</li> <li>• 1.12% of enrollees</li> </ul>	<ul style="list-style-type: none"> <li>• 76%: Information provided</li> <li>• 9%: Urgent care</li> <li>• 9%: Contact medical care within 24 hours</li> </ul>
2009 <sup>5</sup>	266	<ul style="list-style-type: none"> <li>• 4.29% of subscribers</li> <li>• 2.70% of enrollees</li> </ul>	

*NOTE: In comparison, 114 survey respondents (13.26% of subscribers) reported having ever used the Nurse Line since enrolling in the Plan.*

#### 5. Claims Costs to Savings Plan

Two-Year Average	# Claims <sup>4</sup>	Cost to Plan
Physician visits (professional service)	7,970	\$2,078,045
Emergency room visits	849	\$136,444

<sup>3</sup> Annual Utilization Report, FoneMed. 2010, 2011

<sup>4</sup> "Final Disposition," as defined by AIPM, is the resulting recommendation made by the Nurse Line representative after consultation with the caller. Recommendations are categorized, tracked and reported as: 911-Emergency; Immediate-Urgent Care; Contact Medical Care Within 24 Hours; Contact Medical Care Within 72 Hours; Contact Medical Care Within 2 Weeks; Home Care; Information Provided.

<sup>5</sup> 2009. Nurse Line contract with different provider and tracked different categories.



<b>Per claim for<sup>6</sup>:</b>	<b>Cost to Plan<sup>7</sup></b>	<b>Cost per Subscriber</b>	<b>Cost per Claimant</b>
Average physician visit (professional service)	\$261	\$734	\$512
Average emergency room visit	\$161	\$762	\$700

Cost data confirms that, as a high deductible health plan, the costs to the Savings Plan are not as significant as they would be for another type of health care plan.

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## **Evaluation Methods**

### **Utilization Data vs. Plan Cost Data**

- *Handbook Utilization Cost (no prior data available)<sup>8</sup>*
  - 2011 Survey: 426 reported they have used the Handbook one or more times since receiving it (49.53% of respondents/subscribers or 3,495). Based on contract costs for the book at \$33,869, **per use cost for the book as reported is \$9.69.**
- *Nurse Line Utilization Cost<sup>9</sup>*
  - 2011: 48 calls (0.68% of subscribers or 0.43% of enrollees as of 1/1/12). Based on contract costs for the Nurse Line at \$66,891, **per use cost for the book as reported is \$1,393.56.**
  - 2010: 123 calls (1.82% of subscribers or 1.12% of enrollees as of 1/1/11). Based on contract costs for the Nurse Line at \$64,142, **per use cost for the book as reported is \$521.48.**
  - 2009: 266 calls (4.29% of subscribers or 2.70% of enrollees as of 1/1/10). Based on contract costs for the Nurse Line at \$58,785, **per use cost for the book as reported is \$221.00.**

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<sup>6</sup> The Savings Plan is a high deductible health plan. Insured individuals must pay a \$3,000 (for single coverage) or \$6,000 (for family coverage) before the plan begins to pay benefits. Out-of-pocket costs for subscribers/claimants include any deductible amounts paid. Because of this, claims paid on behalf of the plan are lower than they would be under a standard indemnity, preferred provider organizational plan or HMO. The higher deductible also means higher out-of-pocket claims costs for the insured, although coverage is provided at a lower premium.

<sup>7</sup> Claims costs provided by EIP Statistics unit. Figures for Cost to Plan, Cost per Subscriber and Cost per Claimant figures are averages, based on a rolling, two-year period of aggregate claims data reported from September 2009 - August 2010 and September 2010 – August 2011. Date periods allow for run-out period for filing claims to capture more accurate costs.

<sup>8</sup> Calculated cost is based on Nurse Line portion of contract only. They do not include administrative or other associated contract costs.

<sup>9</sup> Calculated cost is based on Nurse Line portion of contract only. They do not include administrative or other associated contract costs.

### ***Utilization Data vs. Realized Savings Data***

Goal: To identify whether the Savings Plan and/or its subscribers/enrollees save any money as a result of consulting the Healthier at Home Handbook or Nurse Line, thereby avoiding incurring a physician visit or emergency room visit claim.

- Aggregate claims data, including associated costs to both the Savings Plan and its subscribers/claimants was available and reported under #5 on page 8.
- Utilization data, reported under #3 and #4 on pages 7 and 8, quantifies how many subscribers consulted the Handbook and Nurse Line. The survey asks further whether consulting either of these two resources saved the individual a trip to a physician or to the emergency room.

Using this data, we can estimate the potential cost savings to the Plan and to its subscribers as follows:

<b>Healthier at Home Handbook</b>	<b>Claims Avoided</b>	<b>Plan: Claim Av.</b>	<b>Est. Savings to Plan</b>	<b>Subscriber: Claim Av.</b>	<b>Est. Savings to Sub.</b>
Physician visits (professional service)	1,297	\$261	\$338,632	\$693,709	\$664,290
Emergency room	56	\$161	\$9,060	\$41,601	\$39,390

<b>Nurse Line</b>	<b>Claims Avoided</b>	<b>Plan: Claim Av.</b>	<b>Est. Savings to Plan</b>	<b>Subscriber: Claim Av.</b>	<b>Est. Savings to Sub.</b>
Physician visits (professional service)	445	\$261	\$116,103	\$512	\$227,757
Emergency room	25	\$161	\$3,974	\$700	\$17,276

The limitations of the data are:

- There is no way to verify the accuracy of the survey responses; their claims cannot be verified, especially for the Handbook.
- Call volume to the Nurse Line is reported under #4 on page 8. Call data provided from the contracted vendor is much lower than reported via subscriber survey as represented above.

- No contact information is maintained on individual enrollees; only on subscribers. Therefore, it cannot be verified whether the survey responses applied to only the subscribers or whether their responses applied to any covered family members as well.
- Enrollment into and out of the Plan is ongoing, while data provided by the Nurse Line contractor and claims data is cumulative at year end. Also, survey data reported as one snapshot in time during September-October 2011.
- Only the two most significant cost factors (in terms of expense and/or frequency) were examined within this research document: emergency room visits and physician visits. These two factors were also those highlighted and measured in the 2003 Survey, noted on page 1. These measurements do not take into account other factors which could also lead to additional cost savings.

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## ***Summary and Recommendations***

The assumption, based on the data, may be made that survey respondents have likely over-reported their utilization of the Handbook and Nurse Line. However, even if we were adjust those figures downward by half, estimated savings to the Plan and its subscribers indicate the contract with AIPM would continue to be cost-effective:

- **Total estimated cost to Plan for handbook and Nurse Line:** **\$200,673**
- **Total estimated savings to Plan for handbook and Nurse Line:** **\$467,768**
- **Total estimated savings to subscribers for handbook and Nurse Line:** **\$948,713**

The contract is paid on a per-member per-month basis. As it is not based on utilization, and increase in utilization of the Handbook and Nurse Line would not incur additional costs to the Plan or to the subscriber. Therefore, additional marketing efforts may result in greater savings to both the Plan and to its enrollees. Estimated cost savings for Plan enrollees is substantial; four times that for the Plan. Greater utilization of the Handbook and Nurse Line could mean significant savings to a greater number of enrollees, at no additional cost to the Plan, other than by actual enrollment numbers.



Survey responses indicated that a majority of Savings Plan subscribers are not aware they have these resources at their disposal or that they do not use them. Currently, the front cover of the book and welcome letter are the only two directly marketed items subscribers receive. These services are also explained in EIP's Insurance Benefits Guide, but the Nurse Line number is not published in the Guide, or outside individuals could attempt to call the Nurse Line. Occasional articles are written by EIP staff and included in its communications pieces.

### ***Recommendations***

- **Rebid and award contract for 2013.** In the request for proposal, include stepped-up marketing, including:
  - A more customizable newsletter or an insert to the newsletter that highlights the Savings Plan benefits, such as the handbook and Nurse Line and other important Plan information.
  - Wallet cards for the welcome kit, that include the Nurse Line # and reference to the Healthier at Home handbook. As emergencies can happen outside the home, this information would be more helpful if it were more accessible to Plan enrollees. Encourage enrollees to add the Nurse Line # to their cell phone contacts.
  - Increase the boldness and visibility of the Nurse Line number on the cover of the handbook. It does not stand out.
  - Pending additional research, consider adding a healthcare app as part of the contract or marketing a free version. There are several in the marketplace for Android and iPhone, such as iTriage® or Mayo Clinic's Symptom Checker. Essentially, these apps function as a portable, electronic version of the Healthier at Home handbook. Similarly, there are full websites that serve the same function. EIP's Wellness Initiatives Department, which includes Prevention Partners, is currently investigating these products and services for their potential benefits to EIP's subscriber base.
- **EIP Communications and Training to increase marketing efforts.** Aside from assisting the handbook and Nurse Line contractor with articles and other information for subscribers, additional communication of these benefits should be made now:



- Explain the handbook and Nurse Line in more detail on the preventive benefits page of the EIP website: <http://eip.sc.gov/prevention/index.aspx?p=4&s=8&t=58>
- Develop a flyer for online and print use that emphasizes the preventive benefits offered through this Plan, including the handbook and Nurse Line. This flyer will then be sent to area benefits administrators/personnel offices for print and distribution to Savings Plan subscribers. This can be done now.
- For both the Insurance Orientation and Benefits Administrator training presentations and class education, these benefits will be highlighted to increase awareness. These are updated annually, and will be update for the start of the new contract.
- Include estimated savings information for Savings Plan subscribers in periodic communications and e-newsletter articles to quantify the potential savings from avoiding a trip to the ER or physician if unnecessary.
- **Re-evaluate product and services effectiveness in three years.** Repeat similar research: conduct follow-up survey, track and report claims expenditures, analyze costs and estimate Plan and subscribers' savings to determine whether the trend is improving or declining. If a new functionality, such as a phone app, is added to the new contract, effective 1/1/2013, include it in the research.
  - If results prove contract no longer cost-effective, conclude or terminate early, deciding whether to continue any portion of the contract that appears to be effective. For example, if Nurse Line numbers continue to decline, consider terminating that service, but continue the handbook.
  - If results indicate greater utilization and savings, consider what features of the contract might be applied to the other plans offered by EIP, and investigate the potential for expanding the contract across one or more other health plans.